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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,966	07/28/2003	Patricia A. Wang	200209420-1	6184

22879 7590 04/26/2006

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EXAMINER

SHOSHO, CALLIE E

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 04/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/628,966

Applicant(s)

WANG ET AL.

Examiner

Callie E. Shosho

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2006.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19,22-42,45 and 46 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-19,22-42,45 and 46 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. All outstanding rejections except for those described below are overcome by applicants' amendment filed 2/6/06.

The new grounds of rejections set forth below are necessitated by applicants' amendment and thus, the following action is final.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-19, 22-42, and 45-46 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 1 and claim 24 have each been amended to recite that the color ink includes a component selected from the group consisting of multivalent salts and organic acids that interacts with said polymer "at appropriate pH by rendering said pigment dispersed with said polymer in said black ink insoluble by transforming said polymer into a water-insoluble protonated form". It is the examiner's position that this phrase fails to satisfy the written description requirement under the cited statute since there does not appear to be a written description requirement of the phrase "multivalent salts" that interact with said polymer "at

appropriate pH by rendering said pigment dispersed with said polymer in said black ink insoluble by transforming said polymer into a water-insoluble protonated form” in the application as originally filed, *In re Wright*, 866 F.2d 422, 9 USPQ2d 1649 (Fed. Cir. 1989) and MPEP 2163.

As support for the above amendment, applicants point to page 2, paragraph 7 and page 8, paragraph 30. It is noted that while there is support in paragraph 30 of the specification as originally filed to recite that the organic acids interact with said polymer “at appropriate pH by rendering said pigment dispersed with said polymer in said black ink insoluble by transforming said polymer into a water-insoluble protonated form”, there is no support in the specification as originally filed to recite that the multivalent salts interact with said polymer “at appropriate pH by rendering said pigment dispersed with said polymer in said black ink insoluble by transforming said polymer into a water-insoluble protonated form”.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-19, 22-42, and 45-46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 and claim 24 have each been amended to recite that the color ink includes a component selected from the group consisting of multivalent salts and organic acids that interacts with said polymer “at appropriate pH by rendering said pigment dispersed with said polymer in said black ink insoluble by transforming said polymer into a water-insoluble

protonated form”. The scope of the claims is confusing because it is not clear what is meant by “appropriate” pH. What values of the pH would be considered “appropriate”? Clarification is requested.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1-19, 22-42, and 45-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parazak (U.S. 6,281,267) in view of Zhu (U.S. 5,889,083).

The rejection is adequately set forth in paragraph 6 of the office action mailed 11/3/05 and is incorporated here by reference.

Further, given that Parazak in combination with Zhu discloses color ink comprising multivalent salt or organic acid and black ink comprising hydrolyzed styrene-maleic anhydride copolymer as presently claimed, it is clear that at appropriate pH, the multivalent salt and/or organic acid would intrinsically interact with the styrene-maleic anhydride copolymer by rendering the pigment intrinsically dispersed with the styrene-maleic anhydride copolymer in the black ink insoluble by transforming the styrene maleic anhydride copolymer into a water-insoluble protonated form as presently claimed.

Response to Arguments

8. Applicants' arguments filed 2/6/06 have been fully considered but they are not persuasive.

Specifically, applicants argue that there is no motivation to combine Parazak with Zhu given that Parazak discloses typical drop-on-demand ink comprising low amount solids while Zhu discloses continuous ink jet ink comprising large amounts of solids which are not jettable by the typical drop-on-demand thermal ink jet ink process used in Parazak. Applicants point to example 1, for instance, in Zhu as ink that possesses 25% solids and to example 4, for instance, in Parazak as ink that possesses 4% solids.

However, it is noted that example 1 of Zhu and example 4 of Parazak are just one of the preferred embodiments set forth in each reference. It is noted that "nonpreferred disclosures can be used. A nonpreferred portion of a reference disclosure is just as significant as the preferred portion in assessing the patentability of claims", *In re Nehrenberg*, 280 F.2d 161, 126 USPQ 383 (CCPA 1960). A fair reading of Parazak as a whole discloses the use of 0.1-10% pigment and 0.1-10% polymer as well as additives that include polymer (col.7, lines 55-56 and 61-64). Thus, it is clear that Parazak discloses inks having at least amount of solids of 0.2-20%. Further, a fair reading of Zhu as a whole discloses the use of 0.01-10% pigment, 1-40% polymer, and 0.01-30% wax (col.4, lines 42-43, col.6, lines 34-35, and col.8, lines 28-29). Thus, it is clear that the ink of Zhu can comprise either low, i.e. 1.11%, or high, i.e. 80%, solids including amounts that overlap those found in Parazak.

Further, while applicants argue that Parazak discloses typical drop-on-demand ink and point to example 4 which applicants state utilize drop-on-demand printer, this is just one

preferred embodiment of Parazak. Attention is drawn to col.9, lines 16-19 of Parazak that discloses that the ink of Parazak may be used “in any conventional ink-jet or bubble-jet or piezoelectric printer”. Thus, the ink of Parazak is not limited only to those printed by drop-on-demand printer but includes inks printed by any conventional printer which would clearly encompass the inks of Zhu.

Given that Zhu utilizes ink with amount of solids that overlaps that disclosed in Parazak and given that Parazak encompasses ink used in any conventional printing process, it is the examiner’s position that, contrary to applicants’ arguments, the ink of Zhu could be used in the same system as the ink of Parazak.

Thus, given that Parazak discloses using ink in any conventional ink jet printing process wherein the amount of solids present in the ink ranges from 0.2-20% and given that Zhu discloses ink with amount of solids that overlaps that disclosed by Parazak, it is the examiner’s position that there is motivation to combine Parazak with Zhu and that the combination of Parazak with Zhu is proper.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

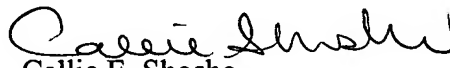
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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Callie E. Shosho
Primary Examiner
Art Unit 1714